EXECUTIVE SUMMARY

State Transportation Funding Trends and Comparative State Assessment

Transportation Funding Series
Special Report No. 2

December 31, 2002

The Jim Self Center on the Future

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16. Abstract

This report is the second in a series of three reports that address the issue of funding transportation infrastructure in the State of South Carolina. This report summarizes trends in state revenues used for highways from the FHWA annual publication *Highway Statistics,* and other sources. It also provides rankings of the states by the percentage of own-source state revenue in 2000 that came from individual revenue sources such as motor fuel taxes, motor vehicle registration and carrier fees, and state general funds. Detailed revenue and expenditure trends for South Carolina and all states combined are compiled for every five years between 1965 and 2000. These statistics are presented on the basis of total dollars, percentage share of total, dollars per capita, dollars per million vehicle miles traveled, and dollars per state-maintained road mile. Additional statistics are presented for the southeastern states for the year 2000. Among the findings are:

- The state is falling further behind in terms of state transportation funding capacity. Since 1965, real (inflation-adjusted) revenues used for highways increased by 2.7% in South Carolina compared to 37.7% nationally and 51.1% percent in the Southeast (12 states). On a real per capita basis, state revenues fell by 36.1%. In this measure the state ranked 48th in the country and last in the Southeast in terms of real revenue growth per capita.
- At 16.75 cents per gallon, only 5 states have a lower adjusted gasoline fuel tax (excise tax plus all other sales taxes and per-gallon fees) than South Carolina. Yet, South Carolina ranks second in the country in fuel tax dependency. Combined revenues from federal and state fuel taxes account for 88% of total state transportation revenues used for highways in South Carolina in 2000. The state's motor fuel tax alone accounts for 79.8% of state own-source revenues used for highways. That figure compares to a national average of 49.4% and a regional average of 52.0%. SCDOT currently derives 92% of its state-source revenues from the fuel tax.
- At a 2000 highway spending level of $242 per capita, the state ranks 48th in the nation and next-to-last in the region in per capita expenditures on transportation. Low funding levels are of particular concern given South Carolina's large state-maintained road system. The state ranks last in both the region and nation in expenditures per road mile.

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STATE TRANSPORTATION FUNDING TRENDS

AND COMPARATIVE STATE ASSESSMENT

EXECUTIVE SUMMARY

Transportation infrastructure has increased substantially over the past century. The means of funding transportation infrastructure has changed as well. South Carolina's earliest road maintenance program dates to 1680 and used required labor commitments. With the introduction of the automobile, the first vehicle registration fee of $1.00 was imposed. The state's first motor fuel tax was approved in 1922, and by 1925 the state's fuel tax of five cents per gallon was the highest in the country. A 1939 study by the Highway Department indicated that South Carolina was spending considerably more on highways than other states in the Southeast on both a per capita and land area basis.

Times have changed considerably in terms of transportation needs and funding options. Meeting future transportation infrastructure needs has emerged as one of the more important issues for state governments across the country. In South Carolina the outlook is particularly dire, as the state has lagged behind other states in the region in terms of transportation funding capacity.

This report is the second in a series of three reports assessing funding options for transportation infrastructure in the state of South Carolina. The first report presented findings from a survey of residents to identify key transportation issues, to assess funding priorities, and to determine public perception as to alternative funding options.

The current report examines the driving forces affecting transportation, reviews historical trends in terms of transportation revenues and expenditures, and offers a comparative assessment to determine how South Carolina compares to other states in terms of transportation funding mechanisms. Data compiled by the U.S. Department of Transportation's Federal Highway Administration (FHWA) is used to facilitate comparisons between states. These data include all state revenues and expenditures used for highways, not solely those of the South Carolina Department of Transportation (SCDOT).

The third report will identify revenue options for the state to address transportation infrastructure needs and will project alternative revenue combinations to meet future needs as identified in the SCDOT's 2002 *South Carolina Multimodal Transportation Plan*.

DRIVING FORCES

This report begins with an examination of the driving forces that have been and are likely to continue to influence transportation delivery systems. These driving forces include:

- demographic and economic change generating a growing demand for transportation infrastructure,
- technological change as it affects the transportation sector, and
- institutional change in the delivery of transportation infrastructure.

On the demand side, demographic and economic trends have generated increased system utilization. Since the automobile was introduced at the beginning of the 20th Century, the U.S. population has increased by 270 percent. The national economy has grown still more rapidly. Since 1930, real GNP has increased over twelve-fold, close to nine times the rate of population growth. The demand on highway systems also accelerated in the latter half of this past century. Between 1960 and 2000, the number of vehicles on the road has tripled and the number of vehicle miles traveled has nearly quadrupled.

Improvements in vehicle technology, highway system expansion, and inexpensive fuel have accommodated this increasing demand. Despite recent price increases, inflation-adjusted fuel prices today are actually comparable to the pre-Energy Crisis prices of 1973. Adjusted for inflation, prices today are also 45 percent of 1949 prices and 50 percent of 1981 prices.

Changes in vehicle technology are on near-term and intermediate-term horizons with alternative fuel vehicles, hybrid engines and fuel cell technology likely to capture a higher market share in the coming years. The fiscal implications of this shift may be substantial in the future as the largest share of state revenues for highways continues to be derived from fuel taxes. Institutional changes are also likely as government entities attempt to address transportation needs. At the federal level, reauthorization of the Transportation Equity Act for the 21st Century in the next Congress will dictate national transportation policy in terms of both funding levels and program priorities. For states, the critical issue is how to meet current and future transportation infrastructure needs in a tight fiscal environment.

REVENUE AND EXPENDITURE TRENDS

Since the early 1900s, revenues and expenditures for transportation have continued to increase to meet infrastructure needs. The largest shares have gone for highways, including roads, bridges and related functions such as law enforcement and safety. Between 1921 and 2000, revenues used for U.S. highways by all levels of government—federal, state, and local—increased 86-fold according to the FHWA. Adjusting for inflation, real revenues still increased nearly nine-fold, or close to 800

percent.[1] Total revenues used by all states for highways[2]—from both state and intergovernmental sources—increased by 267-fold in current dollars and 28-fold in constant (inflation-adjusted) 1996 dollars over that same seventy-nine year period.

State own-source transportation revenues have continued to grow in recent years although growth rates have been less rapid than those of earlier years. Since 1965, state own-source revenues for highways increased by 732 percent in current dollars, while inflation-adjusted dollars grew by 37.7 percent nationwide and 51.1 percent in the Southeast (Table S.1). In South Carolina, state own-source revenues in real dollars remained almost flat with a 2.7 percent growth rate. South Carolina ranked 44th in the country and 11th out of 12 southeastern states in own-source revenue growth for highways between 1965 and 2000, a period of comparative prosperity for the state.

Nationally, state own-source revenue growth in 27 states failed to keep pace with population change over this time period. On average, state own-source revenues per capita fell by 5.4 percent overall and by 8.7 percent in the Southeast, while revenues per capita fell by 36.1 percent in South Carolina. In terms of revenue growth per capita since 1965, the state ranks 48th in the nation and last among 12 southeastern states. South Carolina's level of transportation investment per capita fell at four times the regional average over this time period.

Table S.1
Growth in State Own-Source Revenues Used for Highways: 1965-2000

	% Change Revenues (current $)	% Change Revenues (constant $)	SC Rank (constant $)	% Change Per Capita (constant $)	SC Rank Per Capita (constant $)
National Average	731.9%	37.7%	44 (of 51)	-5.4%	48 (of 51)
Southeastern Average	813.1%	51.1%	11 (of 12)	-8.7%	12 (of 12)
South Carolina	520.7%	2.7%	--	-36.1%	--

Source: USDOT *Highway Statistics 1965* and *2000*.

Initiated in Oregon in 1918 and at the federal level in 1932, motor fuel taxes continue to be the primary source of transportation revenues. South Carolina's motor fuel excise tax of 16 cents per gallon (cpg) is below the national average of 19.2 cpg and the regional average of 17.1 cpg. Most states add additional charges to fuel excise taxes. At least nine states apply a sales tax to fuel in addition to the fuel tax. Other levies are made in the form of environmental, underground storage, and inspection fees. Accounting for these additional charges at September 2002 average pre-tax gasoline prices, South Carolina's adjusted motor fuel tax rate of 16.75 cpg is in 46th place in the nation with only five states having lower rates. Within the region, only Georgia (12.0 cpg) and Kentucky (16.4 cpg) have lower adjusted fuel tax rates than South Carolina. Because

[1] Bonds and transfers to local governments included; federal transfers excluded.
[2] Bonds excluded.

Kentucky's motor fuel excise tax rate is based upon the pre-tax price of gasoline, its adjusted tax rate could surpass South Carolina's if gas prices rise sufficiently.

Focusing only on base fuel taxes, South Carolina derives 88.0 percent of its total highway revenues from combined state and federal fuel taxes, despite its low motor fuel tax rate (Table S.2). As a result, the state ranks second only to Montana in terms of fuel tax dependency. Nationally, 62.8 percent of total highway revenue is derived from combined state and federal fuel taxes; regionally, 66.3 percent of revenues are derived from fuel taxes.

Table S.2
State Motor Fuel Tax Rates and
Fuel Tax Dependency by Geographic Area: 2000

	State Motor Fuel Excise Tax	Adjusted State Motor Fuel Tax	State + Federal Motor Fuel Tax Revenues as % of Total Revenues	State Fuel Tax Revenues as % of State-Source Revenues
National Average	19.20 cpg	21.85 cpg	62.8%	49.4%
Southeastern Average	17.10 cpg	19.66 cpg	66.3%	52.0%
South Carolina	16.00 cpg	16.75 cpg	88.0%	79.8%

Source: USDOT *Highway Statistics 2000.*

Using only state own-source revenues, South Carolina continues to rank second in the country and first in the Southeast with state fuel taxes accounting for 79.8 percent of revenues derived internally. Nationally, 49.4 percent of state own-source revenues are generated by state fuel taxes. The average southeastern share is 52.0 percent. Nearly 92 percent of the SCDOT's own-source revenues are generated by the state fuel tax in the current budget year.

Table S.3 shows average relative shares of state own-source revenues by source for all states, southeastern states, and South Carolina. On average, 26.7 percent of state own-source highway revenues are derived from motor vehicle and carrier taxes nationally and 25.0 percent for the region as a whole. With 15.3 percent of own-source revenues coming from state motor vehicle and carrier taxes, South Carolina ranks 44th in the nation and 10th in the region in this category. Of those motor vehicles and carrier taxes, the State Transportation Infrastructure Bank is dependent on truck registration fees while twenty percent of automobile registration fees are dedicated to SCDOT.

Table S.3
State Own-Source Revenues Used by States for Highways,
South Carolina, Southeast and United States Average: 2000

	South Carolina[a]	Southeastern Average	National Average
(% of own-source)			
Motor fuel taxes	79.8%	52.0%	49.4%
Mot. veh. & carrier taxes	15.3%	25.0%	26.7%
Tolls	0.0%	5.6%	8.2%
General funds	0.0%	7.3%	7.0%
Other state imposts	0.0%	6.2%	4.1%
Miscellaneous	4.9%	3.9%	4.7%
Total	100.0%	100.0%	100.0%
Total per capita	$115.84	$198.23	$206.75
Total per million VMT	$10.21	$18.05	$21.16
Total per road mile	$11,140	$40,462	$70,272

[a]In South Carolina, revenues include funding for SCDOT, the Transportation Infrastructure Bank, transfers to counties, and highway law enforcement and safety.
Source: USDOT *Highway Statistics 2000.*

Thirty-eight states (including the District of Columbia) use revenues from general funds as a highway revenue source, while 29 states generate toll revenues for highways. On average, general funds account for 7.0 percent nationally and 7.3 percent regionally of state own-source revenues. South Carolina does not use general fund allocations for highways, although some general funds are used for transit operations. Tolls account for 8.2 percent of funding nationally and 5.6 percent regionally. South Carolina now collects funds from the Cross Island Parkway, and the private Southern Connector is in operation. These funds are comparatively small—less than one percent of total revenues—and were not included in the data presented here. The bottom line is that despite low fuel tax rates, the state's high fuel tax dependency occurs as a result of the lack of other funding options.

South Carolina's level of own-source funding for highways looks even more skewed when population and road system characteristics are taken into account. Per capita, the state's own-source revenues in 2000 are only 56.0 percent of the national average and 58.4 percent of the southeastern average. Per million vehicle miles traveled (VMT), revenues are only 56.6 percent of the southeastern average and only 48.3 percent of the national average. Looking at state own-source revenues per state-maintained road mile, South Carolina revenues are 27.5 percent of the Southeast average, and are only 15.9 percent of the national average.

South Carolina's highway spending levels are similarly low. On a per capita basis, South Carolina expends $242 per capita on highways (including law enforcement and safety) compared to national and regional averages of $319 and $299, respectively. The state ranks 48th in the nation and next-to-last in the region in terms of highway

expenditures per capita. On a per road mile basis, South Carolina spends $23,256 per road mile versus the national and regional averages of $110,749 and $61,011 (Table S.4).

The state ranks last in both the nation and region in terms of expenditures per road mile. The expenditures per road mile are low because of the state's extensive state road network, the fourth largest in terms of road mileage. Because the state has a high number of secondary road miles in its system that require less maintenance than primary roads, the numbers may be somewhat deceiving. In addition, the state may benefit financially from the large number of road miles in the state system due to cost savings from economies of scale. Still, the magnitude of the differences should be a red flag to state officials.

Table S.4
State Expenditures for Highways,
South Carolina, Southeast and United States Average: 2000

	South Carolina	Southeastern States	United States
(% of total spending)			
Capital Outlay	51.7%	58.1%	53.0%
Maintenance	23.9%	17.6%	14.4%
Administration & Safety[a]	16.0%	11.7%	12.5%
Debt Service[b]	2.4%	5.5%	7.8%
Transfers to Local Govt.	5.9%	7.2%	12.3%
Total	100.00%	100.0%	100.0%
Total per capita	$241.83	$298.91	$319.21
Total per million VMT	$21.31	$27.22	$32.67
Total per road mile	$23,256	$61,011	$110,749

[a] Includes administration, highway law enforcement and safety, and miscellaneous.
[b] Interest and bond retirement and bond redemption by refunding combined.
Source: USDOT *Highway Statistics 2000.*

IMPLICATIONS

The realization that the gap between transportation needs and fiscal capacity is widening has generated a dialogue in this state to consider options for funding transportation improvements. Much of the discussion to date has focused on fuel tax increases. With the last state fuel tax increase having occurred in 1987, there has been substantial erosion in the purchasing power of that revenue source, and it is likely that a fuel tax increase will be necessary to meet immediate needs.

Longer term, the state must consider a comprehensive revenue package that meets immediate and long term transportation infrastructure needs. That package will likely

include fuel taxes. Yet, the state will need to consider its high fuel tax dependency as well as the static nature of fuel taxes and their vulnerability to both long-term market forces and technological change. As a result, other funding options will need to be considered as well.

The final report of this series will assess revenue options to meet projected transportation needs in South Carolina. After reviewing funding options, the report will simulate funding alternatives to meet the state's future transportation needs as identified in the *South Carolina Multimodal Transportation Plan.*